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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/071,376	02/08/2002	Nian hua Ou	01-450	1739

7590 03/03/2004

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EXAMINER
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STERLING, AMY JO

ART UNIT	PAPER NUMBER
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3632

DATE MAILED: 03/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b> 10/071,376	<b>Applicant(s)</b> OU ET AL.	
	<b>Examiner</b> Amy J. Sterling	<b>Art Unit</b> 3632	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02 February 2004.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All   b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                             | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____                                    |

### **DETAILED ACTION**

This is the **Final Office Action** for application number 10/071,376 Laminated Wood Piece and Door Containing the Same, filed on 2/8/02. Claims 1-15 are pending. This **Final Office Action** is in response to applicant's reply dated 2/2/04 . The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

#### ***Drawings***

The objections to the drawings has been withdrawn due to the arguments presented in the Reply, dated 2/2/04.

#### ***Claim Rejections - 35 USC § 103***

Claims 1, 2 and 10-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over United States Patent No. 5546715 to Edstrom and in view of the admitted Prior art, cited in the present application 10/071376, dated 2/8/02 in Figure 5 (hereinafter Prior Art), the and further in view Web brochure for Buell Door, dated 2000.

The patent to Edstrom discloses a laminated wood piece having a solid hardwood component (5d)having an upper surface and a lower surface that are substantially parallel to each other and a wood core with grains oriented substantially parallel to the lower surface of the solid hardwood component. It is evident from Fig. 2,

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that the lower grade wood has its grain running substantially parallel to the hardwood veneer layers of 5d.

Edstrom does not specifically disclose that the core is made from layers of a wood composite material. However the Prior Art, as described by the specification on page 1, lines 26-29, teaches that "wood composite materials can be used to form the internal core of a door", in order to have use less wood and to have a cheaper more durable core. Therefore it would have been obvious that the core as referred to by Edstrom could be fashioned from a wood composite material, in order to have a more durable and cheaper core.

Though Edstrom shows the veneer layer (5d) has much less a thickness than the lower grade wood layer (5a), neither Edstrom nor the Prior Art recite specific dimensions of the embodiment or the following configurations of the stile used in a door including an additional stile member being arranged substantially parallel to the at least one stile member the additional stile member have a substantially vertical orientation, with a core, a pair of rails, and a pair of opposed doorskins, wherein at least one stile is in contact with the core.

The Buell Door Web brochure, dated 2000 shows a door with additional stile member being arranged substantially parallel to the at least one stile member the additional stile member have a substantially vertical orientation, with a core, a pair of rails, and a pair of opposed doorskins, wherein at least one stile is in contact with the core and specifically cites the thicknesses that could be used in a laminated stile or rail which include the ranges of a thickness of the solid hardwood component to a thickness

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of the wood composite component from about 1:1 to about 1:10, preferably from 10 about 1:2 to about 1:5, is about 0.3 cm to about 1.3 cm, preferably about 0.6 cm to about 1.1 cm, and the thickness of the wood composite component is about 0.6 cm to about 5 cm, preferably about 2.2 cm to about 3.3 cm. (See stile thicknesses and veneer thicknesses in Chart of 20 Min. Stile and Rail). This structure and dimensions are design choices, which may reduce the material costs as the higher grade wood usage is decreased and the lower grade wood is increased. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made from the teachings of the Buell Door Web brochure to have built the device of Edstrom and the Prior Art with the dimensions cited above in order to reduce material costs.

The method of claims 14-16 is inherent from the structure cited above.

Claims 3-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over United States Patent No. 5546715 to Edstrom and in view of the admitted Prior art, cited in the present application 10/071376, dated 2/8/02 in Figure 5 (hereinafter Prior Art), and in view of Web brochure for Buell Door, dated 2000 and further in view of United States Patent Publication US 2003/0008110 A1 to Hsu.

Edstrom, the Prior Art and the Buell Door brochure show the basic inventive concept as cited above and including where the width of the piece could be 3 cm to 6 cm and the length of the piece could be 120 cm to about 305 cm in length.

Edstrom, the Prior Art and Buell Door do not specifically recited that the wood composite of lower quality wood is an oriented strand board, nor do they recited the specific properties of a screw holding strength of about 400 lbs to about 1200 lbs, a

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density of 35 lbs/ft<sup>2</sup> to about 48 lbs/ft<sup>2</sup>, a split resistance of greater than about 1000 lbs, where at least 90 wt% of the strands are oriented substantially parallel to the length of the laminated wood piece, with added adhesive from about 3 wt% to about 6 wt% of the overall weight and from about 1% to about 2.5% of a wax additive.

Hsu teaches oriented strand board with a screw holding strength of about 400 lbs to about 1200 lbs, a density of 35 lbs/ft<sup>2</sup> to about 48 lbs/ft<sup>2</sup>, a split resistance of greater than about 1000 lbs, where at least 90 wt% of the strands are oriented substantially parallel to the length of the laminated wood piece, with added adhesive from about 3 wt% to about 6 wt% of the overall weight and from about 1% to about 2.5% of a wax additive. (See Table 1, on page 5). These dimensions are design choices, of oriented particle board used for their strength and moisture resistant properties. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made from the teachings of the Hsu to have used an oriented strand board with the above cited dimensions in order to have the above properties.

### ***Response to Arguments***

The applicant has argued that Edstrom nor Buell do not teach a wood composite material. This is persuasive in that Edstrom nor Buell does not specifically teach a wood composite material, but the rejection states that it would be obvious to use a wood composite material for the core as described by Edstrom, using the prior art as stated by the applicant. (See Specification page 1, lines 14-19) The applicant stating that "Plywood, particle board and oriented strand board are examples of wood-based

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composite alternatives to natural solid wood lumber that have replaced natural solid wood lumber in many structural applications in the last **seventy-five years.**" From this statement of the prior art it would be obvious to use such a material as the core of the Edstrom device in order to reduce the costs of using a higher grade wood. This was in the general knowledge of the art at the time of the invention and therefore, the argument that Edstrom nor Buell does not each a wood composite material, is persuasive, but does not render the alleged invention patentable, due to the above rejection which uses the applicant's cited prior art in combination with Edstrom and Buell to reject the wood composite limitation.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, as cited above the use of a wood composite material, was generally available to one of ordinary skill approximately 75 years before the present alleged invention as cited by the applicant in the Specification, used for its money saving properties and therefore there is enough motivation to combine the references.

The applicant has also argued that the term "core" is used for two different constructive elements in Edstrom and the Prior Art and therefore there would be no

motivation to combine the two references. This is unpersuasive in that the term "core" as mentioned by the Prior Art in the Specification is not limited by the examples or embodiments used by the applicant, which may represent only a portion of the statement made about the prior art. The term "core" as cited by the Specification may be interpreted in the broadest sense possible, which according to Webster's Dictionary means "a center or foundational part", this definition which may include part of the center of the door, if so desired, or the center of the door frame, as used as the applicant's embodiment.

The applicant has also argued that the reference to Hsu is not relevant and this is also unpersuasive in that the material screw holding strength is shown in a previous material as taught by Hsu and therefore it would be obvious to select the core from this particular material, in order to achieve that particular holding strength.

The above arguments are unpersuasive and therefore the claims remain rejected as stated above.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not



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mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication should be directed to Amy J. Sterling at telephone number 703-308-3271. The examiner can normally be reached (M-F 8 a.m.-5:00 p.m.). If attempts to reach the examiner are unsuccessful, the examiner's supervisor, Leslie Braun can be reached at 703-308-2156. The fax machine number for the Technology center is 703-872-9306 (formal amendments) or 703-308-3519 (informal amendments/communications). Any inquiry of a general nature or relating to the status of this application should be directed to the Technology Center receptionist at 703-308-2168.



AJS  
Amy J. Sterling  
2/20/04



LESLIE A. BRAUN  
SUPERVISORY PATENT EXAMINER